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| **Math Cheat Sheet**  *Per Capita= divide by the total population*  *US Population currently about 300,000,000*  **Rate of Change:** (old-new) / old  **Percent Change:** {(old-new) / old } x 100  **Annual % Change:**  (births + immigrants)–(deaths + emigrants) x 100  number of people  **Doubling Time:** 70 / % growth = years to double  **Determining Percentage:** part = %  whole 100  **Half Life Fractions:**  1/2; 1/4; 1/8; 1/16; 1/32; 1/64; 1/128; 1/256  **Primary Productivity:**  Net Productivity = Gross Product. – Cell Respiration  **Conversions:**  1 Megawatt = 1,000 kilowatts  1 kilowatt = 1,000 watts  1 kilowatt hour = 10,000 BTU’s  kilowatts x hours = kwh  1L = 1,000 mL  **Scientific Notation:**  \*\*To S.N.  0.00068 🡪 6.8 x 10-4  6,845 🡪 6.8 x 103  \*\*To Standard  5.56 x10-6 🡪 0.00000556  5.56 x 106 🡪 5,560,000  **Messing with Scientific Notation:**  \*\*Multiplication🡪 add exponents; multiply bases  (3 x 103)(4 x 105) = 12 x 108 = 1.2 x 109  \*\* Division🡪 subtract exponents; divide bases  (5.2 x 104) / (2.6 x 102) = 2 x 102  \*\*Addition🡪 convert both #’s to the same exponent; add bases; exponents stay the same  (3000 x 106) + (14 x 105) = 3001.4 x 106 = 3.0 x 109  \*\*Subtraction🡪 convert both #’s to same exponent; subtract bases; exponents stay the same  (2000 x 103) – (1000 x 102) = 1900 x 103 = 1.9 x 106 | **Math Cheat Sheet**  *Per Capita= divide by the total population*  *US Population currently about 300,000,000*  **Rate of Change:** (old-new) / old  **Percent Change:** {(old-new) / old } x 100  **Annual % Change:**  (births + immigrants)–(deaths + emigrants) x 100  number of people  **Doubling Time:** 70 / % growth = years to double  **Determining Percentage:** part = %  whole 100  **Half Life Fractions:**  1/2; 1/4; 1/8; 1/16; 1/32; 1/64; 1/128; 1/256  **Primary Productivity:**  Net Productivity = Gross Product. – Cell Respiration  **Conversions:**  1 Megawatt = 1,000 kilowatts  1 kilowatt = 1,000 watts  1 kilowatt hour = 10,000 BTU’s  kilowatts x hours = kwh  1L = 1,000 mL  **Scientific Notation:**  \*\*To S.N.  0.00068 🡪 6.8 x 10-4  6,845 🡪 6.8 x 103  \*\*To Standard  5.56 x10-6 🡪 0.00000556  5.56 x 106 🡪 5,560,000  **Messing with Scientific Notation:**  \*\*Multiplication🡪 add exponents; multiply bases  (3 x 103)(4 x 105) = 12 x 108 = 1.2 x 109  \*\* Division🡪 subtract exponents; divide bases  (5.2 x 104) / (2.6 x 102) = 2 x 102  \*\*Addition🡪 convert both #’s to the same exponent; add bases; exponents stay the same  (3000 x 106) + (14 x 105) = 3001.4 x 106 = 3.0 x 109  \*\*Subtraction🡪 convert both #’s to same exponent; subtract bases; exponents stay the same  (2000 x 103) – (1000 x 102) = 1900 x 103 = 1.9 x 106 |